

# APSC

The Department of  
**Animal and Poultry Sciences**

[www.apsc.vt.edu](http://www.apsc.vt.edu)

## Dear Alumni and Friends:

The campus is buzzing this spring. From activities involving hundreds of young people to the festivities surrounding the Little International weekend, everything has created an exciting atmosphere in Blacksburg. Moreover, by the time you read this newsletter, another great class of Hokies will have graduated, one of the most important activities performed by a major land grant institution.

Though emerging from a period of great economic turmoil, the Department of Animal and Poultry Sciences has experienced tremendous growth in the last couple years. In addition to the four faculty members added last year, we have hired two new faculty members in nutritional physiology and placental biology (reproductive biology). Moreover, we have interviewed three highly qualified individuals for an open geneticist position and are making plans to interview for a neurophysiologist. The former will help the department forge ahead in understanding those animal genes that improve the economic profitability of animal agriculture, while the latter position was created to target the understanding of those biological processes controlling feed intake and animal behavior. Finally, after a very long arduous process, we have filled the Paul Mellon Equine Chair. Adding these individuals to the department has created a real sense of excitement among the faculty.

This growth brings much attention to the department across the globe, as these hires are known for their scientific prowess. These newly hired faculty members not only have experience in the classroom, but also dramatically increase our capacity to provide outstanding instruction.

To support the activities of the current faculty and anticipate the needs of a new cohort, we have

invested heavily in animal facilities on- and off-campus. The old laboratory animal facilities on the first floor are slated for renovation and will house a new CT scanner. This modification is being spearheaded by the engineering program primarily to improve the capability of studying cardiac function. Even so, this is a welcome addition to those faculty members interested in studying animal growth and other biological functions that require this type of imaging. Along those same lines, we are investing heavily in our animal facilities in the basement and have regained control of the Heth Farm cattle feeding facilities. The former is currently being upgraded to handle studies on animal-based greenhouse gas emissions and the latter is targeted for renovation, which will improve our capacity to study forage intake.

This is a small synopsis of the changes impacting the department. We are delighted to be well-positioned to provide great programs for the Commonwealth.

If you have any thoughts or questions regarding the direction or vision of the department, don't hesitate to let me know ([dgerrard@vt.edu](mailto:dgerrard@vt.edu)). We thank you for your support and hope to see you on campus very soon.

Sincerely,



David E. Gerrard, professor and department head  
Department of Animal and Poultry Sciences



David E. Gerrard, professor  
and department head



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VT/0512/WEB/APSC:16

## College of Agriculture and Life Sciences recognizes Mark Cline as Outstanding Alumnus

Written by Lois Caliri

### Virginia Tech's College of Agriculture and Life Sciences recently recognized alumnus Mark Cline as its Outstanding Recent Alumni of the year.

Cline — who received his bachelor's degree in animal and poultry sciences in 1999, his master's degree in 2002, and his Ph.D. in 2005 in the same field — was also recognized this year by the Department of Animal and Poultry Sciences as its outstanding recent alumnus. The event was held at The Inn at Virginia Tech and Skelton Conference Center on March 16, 2012.

A professor at Radford University since 2002, Cline has a stellar record of excellence in teaching, research, and service. Cline has an exemplary history of securing grant funding, generating significant and important research scholarship, and mentoring students for subsequent success in top graduate and professional programs. The fact that he does all this while teaching up to 18 credit hours per semester makes it all the more admirable.

Cline has a passion for teaching and brings an original and innovative approach to his classroom that emphasizes critical thinking and understanding instead of rote memorization.

In 2008, Cline received the Radford University Foundation Distinguished Creative Scholar Award, the highest honor bestowed by the university for original research. In 2011, he was awarded the College of Science and Technology's Excellence in Teaching Award. He has developed significant new insights into



Mark Cline

understanding appetite regulation and is developing a nationally recognized program in obesity research. He has published 38 peer-reviewed research articles in the past five years, all with undergraduate students as coauthors.

*"I am very grateful to my past professors at Virginia Tech," Cline said. "There, I learned to believe in myself and how to do science. I attribute my professional successes as a 'teaching' professor because I mimic how my past professors inspired me to reach for higher levels. Through my ongoing research collaborations with APSC faculty, Virginia Tech continues to inspire me."*

## Scott Greiner and David Moore receive Agribusiness Extension Service Awards

Scott Greiner, associate professor of Extension in animal science and Extension project leader in the Department of Animal and Poultry Sciences at Virginia Tech, and David Moore, Virginia Cooperative Extension agent of agriculture and natural resources in Middlesex County, have been awarded the Virginia Agribusiness Council's 2012 Extension Service Award. Council Board of Directors member Dan Brann of Christiansburg presented the awards during the Virginia Cooperative Extension Conference in Blacksburg, Va., on March 19.

Affectionately known as "Mr. Animal Science," Greiner has been working with beef and sheep producers and extension agents in Virginia since 1998, when he joined the faculty at Virginia Tech. Greiner has developed many statewide educational programs that help producers implement the latest research and technology to increase herd production and the farm economy. He has an innovative leadership style with an unsurpassed ability to produce strong relationships with county



From left: Scott Greiner; Dan Brann, Virginia Agribusiness Council Board of Directors.

Extension agents, which enables him to provide agents with the most up-to-date information so they can assist livestock producers. He is also very involved in youth programs like the State Youth Market Lamb Project and volunteers as a 4-H leader.

Brann said during the presentation, "Dr. Greiner represents the type of specialist that the industry needs more of, those who are committed to working with producers to identify problems and

provide solutions through research, Extension, and outreach."

Moore has been an Extension agent in Middlesex County since 1992 and throughout his career has been a great spokesperson for the agriculture and grain industry. He hosts many farm tours in Gloucester, Mathews, and Middlesex counties and provides a valuable source of information for Virginia grain producers through his replicated research plots. In 2010, he conducted a field survey of conservation tillage usage for grain producers in the peninsula, which produced facts that have been utilized by the industry to address environmental concerns. He was also one of three agents selected to travel to South Africa to learn about agronomic diseases and practices that can be shared with producers in Virginia. "David has been a leader in research and crop production improvement. He is always willing to go the extra mile and has truly been an asset to agriculture in Virginia," Brann said.

## Patent for new insecticide that kills malaria mosquitoes

Malaria is a mosquito-borne disease that causes fever, chills, and flu-like symptoms, which if unchecked can lead to death. According to the Centers for Disease Control and Prevention, in 2010, an estimated 216 million cases of malaria occurred worldwide and 655,000 people died; 91 percent of the cases were in the African Region.



Entomologist and toxicologist Jeffery Bloomquist, chemist Paul Carlier, entomologist Sally Paulson, and molecular biologist Eric Wong of animal and poultry sciences developed a new chemical compound that kills the mosquito that carries the malaria parasite. This compound works by inhibiting the action of the protein acetylcholinesterase, which is needed for nerve transmission. Recently, these researchers received a patent for this compound.

This compound is planned for treating bed nets, which protect people while they sleep, and it also kills several other disease-transmitting mosquitoes. The efficacy of the compound is being tested. The research was funded by a grant from the Foundation for the National Institutes of Health, which was one of 45 awarded from the Grand Challenges in Global Health Initiative of the Bill and Melinda Gates Foundation.

## Virginia Tech undergraduate research conference

Written by Ron Lewis

The 10th annual Undergraduate Research and Prospective Graduate Student Conference was held on April 19 in the Squires Student Center on the Virginia Tech campus. This annual conference offers a professional forum for undergraduates to showcase their involvement in research and creative scholarship. It is intended to enrich the undergraduate educational experience by enabling students to enhance their oral-communication skills through a scholarly exchange of information and ideas. It also assists undergraduates in exploring graduate education as a post-baccalaureate option.

**Jaime Rutter** and **Kathryn Slaughter**, both juniors in the department, participated in the conference by presenting posters describing their undergraduate research projects. The students' contributions were chosen to be included in "Poster Highlights," a weeklong display of their posters in the Newman Library in conjunction with the conference. Their research was conducted within the Beef/Sheep Nutrition lab, with supervision by Laboratory Technician **Sarah Blevins**, Senior Laboratory Specialist **Amy Tanner**, and Professor **Ron Lewis**.

Rutter's poster was titled, "Pigments can be used as fecal markers in cattle." She explained, "The type and amount of forage consumed by cattle affects the efficiency of grazing systems, and



From left, Kathryn Slaughter, Sarah Blevins, Jaime Rutter, and Amy Tanner

therefore, needs to be measured. One method uses waxes found in the cell wall of plants as 'natural' markers. However, this approach requires linking fecal samples to individual animals, which is challenging on pasture. Our aim was to determine if by feeding pigments, we could uniquely identify fecal samples." Of the six pigments tested, two were best for linking individual cattle to their fecal sample, and after only two days of their feeding. Rutter is evaluating additional pigments and feed carriers to identify other colors useful for distinguishing fecal samples in more animals in a pasture setting.

Slaughter's poster was titled, "Whorl position and shape may not reliably predict cattle behavior." Cattle with aggressive temperaments produce dangerous

working conditions. Position and shape of facial whorls have been reported to be predictive of behavior. Slaughter said that "high positions and non-round shapes have been found to be associated with more aggressive behavior. Our objective was to test if such a relationship held true within a calm working environment." The behavior of Angus-cross heifers in a working facility (chute) was scored from 1 (docile) to 6 (aggressive). Facial photos were taken and used to determine whorl position and shape. "Somewhat surprisingly," explained Slaughter, "the relationships we found between whorl measurements and temperament were opposite to that in the literature. Perhaps they are specific to the animals' husbandry circumstances." She is considering that question as a further stage of her undergraduate research.

## Stockmen's contest held at Junior Beef Round-up

It has been several years since the Junior Beef Round-Up at the Rockingham County Fairgrounds has had a Stockmen's contest. This year at the Virginia Beef Expo show, Ashley Ulmer, an animal and poultry sciences student from Broadway, organized and coordinated the Stockmen's contest as part of her animal and poultry science capstone experience. Over 80 youth participated in the Stockmen's contest, making it a possible venture for years to come. Having a Stockmen's contest allows

youth to showcase their skills and expertise in the several areas involved in the livestock industry. It also provides practice for FFA and 4-H members who will be competing at a state or national contest this fall.

The contest consisted of meats judging and identification, hay judging, cattle judging and identification, equipment identification, cattle breeds' identification, and a 25-question quiz. Each component is a valuable part of knowledge that future industry members

ought to know in order to be successful "stockmen". Contestants competed on a junior- or senior-level basis and were allotted two hours for the contest. The 2012 overall winner in the senior contest was Coffman Liggett, and the overall junior winner was Simon Liggett, both of Augusta County. For more information on youth livestock programs in the state of Virginia contact Paige Pratt, Youth Livestock Extension Specialist for the Department of Animal and Poultry Sciences.

## Fall 2011 Animal and Poultry Sciences Dean's List

Jackson T. Ames	Erin N. Deliere	Erin E. Holland	Colette L. McFaden	Jaime K. Rutter
Katherine C. Amos	Alexandra A. Denale	Alyssa L. Homyk	Sarah M. McKay	Andrew G. Sahol
Christopher M. Andrews	Rachel R. Dialectos	Emily A. Horton	Alexandra McMillion	Courtney Scarborough
Brent A. Ashley	Elle K. Donnini	Katherine M. Howe	Stacy A. McPaters	Marie T. Schirmacher
Hayley R. Bance	Megan L. Dunn	Maureen E. Howren	Victoria E. Mellin	Taylor L. Scott
Chelsea D. Banning	Kayla B. Eckard	Katie L. Huffman	Ellen L. Messerly	James R. Shatt
Christine M. Barton	Melanie M. Eldred	Camilla Hughes	Jay F. Miles	Caroline S. Shea
Katelynn E. Basala	Dana L. Ellington	James M. Hunt	Pamela A. Mills	Kathryn A. Shepard
Kaitlyn N. Behr	Alyssa J. Elliott	Katherine A. Jacobs	Kayleigh J. Mize	Justine H. Sherer
Morgan L. Bell	Lauren A. Engel	Erica T. Jacquay	Nicholas G. Moore	Emma P. Shirey
Tiffany D. Bell	Kari A. Estes	Emma L. Jefferies	Sade D. Moore	Brittany L. Sholes
John K. Benner	Christine A. Evans	Margaret-Katherine Jeter	Adam R. Murray	Alysha E. Simmons
Morgan E. Biggs	Kimberly L. Evans	Colleen E. Joyce	Scott J. Neil	Farah-Dale Siodmok
Mollie P. Blythe	Alison M. Fechino	Kelsey P. Kallapos	Amber R. Noel	Drew A. Sollenberger
Elizabeth N. Booth	Erica R. Feldman	Aminata B. Kalley	Anna B. Norwood	Wesley L. Spangler
Elizabeth J. Boott	Shawnee L. Felts	Caitlin P. Keese	Andrea D. Oliver	Victoria J. Stewart
Andrea M. Bradley	Daniel M. Fleishman	Emily A. Kimminau	Kathleen O'Laughlin	Shannon A. Swank
Casey T. Braginton	Caitlin M. Flint	Kea M. Kiser	Karen M. Park	Sarah M. Swisher
Amy M. Brandon	Stephanie E. Folkerts	Erin E. Klingensmith	Grace A. Parker	Emily S. Tanner
Alyssa B. Brooks	Kathryn E. Foster	Erin E. Knight	Akash P. Patel	Emily L. Thomas
Olivia D. Brooks	Suzanne J. Galbraith	Katherine D. Knight	Bly A. Patterson	Michelle K. Thompson
Sabrina N. Brooks	Gabrielle A. Gauthier	Erin M. Koperna	Morgan R. Paulette	Kristen M. Ulmer
Brittany A. Castle	Jessica M. Gilbert	Cassandra M. Kubanda	Krissy E. Peacock	Caitlin E. Ward
Eleanor M. Cayford	Eleanor W. Gould	Kathryn A. Lacy	Kaitlyn S. Peden	Cassandra Washington
Allyson D. Chase	Mackenzie B. Grasso	Andria E. Laib	Rosalie C. Petrone	Taylor L. Watson
Hannah S. Cheng	Sarah R. Greenway	Emily H. Lamotte	Callie S. Pierce	Mary E. Weatherman
Chelsie F. Church	Sarah R. Greenway	Caitlin M. Leith	Crystal M. Prom	Hope H. Wentzel
Keagan N. Clevenger	Connor W. Grimes	Ashley K. Lohr	Kelly E. quesinberry	Sarah E. Williams
Garrett L. Compton	Aaron J. Gringer	Matthew G. Londrey	Jessica D. Repep	Meaghan K. Wilson
Samuel G. Cook	Anna L. Gustafson	Virginia S. Lyman	Anna K. Revercomb	Sarah L. Wray
Elizabeth G. Cory	Samantha D. Haynie	Meghan E. MacGhee	Rachel L. Rice	Janie G. Young
Elena C. Cox	Martha A. Helbert	Margeaux E. Malone	Cassie Rini	Allison Yu
Victoria M. Cox	Patricia J. Helsel	Kerryn L. Manden	Maria C. Rittenhouse	Madeline Zimmermann
Bradley D. Dalton	Sarah G. Helweg	Jessica M. Mautone	Miranda M. Ritzi	
Erica N. Davis	Brittany L. Hendrix	Samantha J. McCarter	Cassandra Robinson	
Lindsay J. Deacon	Hanna J. Herdegen	Jessica L. McCarty	Samantha C. Rogers	
Anna C. DeBerardinis	Patrick C. Hilson	Bailey K. McDade	Amber L. Rosser	
	Rhiannon N. Hodges	Erin S. McDougall	Lauren M. Ruben	
	Julie A. Holdridge			

## 2012-2013 APSC scholarships recipients

Lorenz Neuhoff, Jr. Pork Industry  
Student Leader Scholarship

**Karen Park**

Ralph Hunt Beef Industry Student  
Leader Scholarship

**Daniel Fleishman**

Lou Dixey Beef Industry Student Leader  
Scholarship

**Bradley Dalton**

Fred Campbell Horse Industry Student  
Leader Scholarship

**Krissy Peacock**

Denver D. Bragg Poultry Science  
Student Leader Scholarship

**Amber Littleton**

Rocco Lamb Farms Student Leader  
Scholarship

**Kayleigh Mize**

Animal and Poultry Sciences  
Scholarship

**Colleen McIntyre**

A.L. "Ike" Eller Scholarship

**Brian Cromer**  
**Erin Klingensmith**  
**Andrew Neel**  
**Andrew Sahol**  
**Taylor Scott**

E.A. & H.H. Livesay Scholarship

**Mary Weatherman**

Ashe-Lockhart Scholarship

**Nicole Paris**  
**Rosalie Petrone**  
**Casey Tignor**

Owen Thomas, Jr. Memorial  
Scholarship

**Katherine Howe**  
**Katie Huffman**  
**Jimmy Shatt**

Tom and Christine Marlowe Freshman  
Scholarship

**Andrea Bradley**

Richard S. Ellis, IV and Roy A. Meek, Jr.  
Scholarship

**Daniel Reynolds**

George G. Green Scholarship

**Chris Duffy**

Harry Wyatt Scholarship

**Jaime Rutter**

Lou Dixey Scholarship

**Chelsea Cook**

William Earl Browning Scholarship

**Kelsey Kirschnick**

Ralph Hunt Scholarship

**Scott Neil**  
**Richard Preisser**

Virginia Pork Industry Scholarship

**Hope Wentzel**

Mary Howe diZerega Memorial  
Scholarship

**Ashley Ulmer**  
**Kristen Ulmer**

Arden N. Huff Scholarship

**Kathryn Slaughter**  
**Sarah Williams**

Delano Scholarship

**Stephanie Folkerts**  
**Katie Jeter**  
**Grace Parker**

Jack S. Copenhaver Scholarship

**Brittany Castle**  
**Victoria Cox**  
**Sarah McKay**  
**Anna Revercomb**  
**Cassella Slater**  
**Sarah Wisor**

Charles W. Thomas Memorial  
Scholarship

**Rebecca Breen**  
**Amber Rosser**

C. Gordon Thornhill Scholarship

**Camilla Hughes**  
**Kelsey Johnson**  
**Brittany Neal**

George W. Litton Scholarship

**Andria Laib**  
**Jessica Repep**

Emily Jane Hilscher Memorial  
Scholarship

**Vicki Morrison**  
**Cassella Slater**

General J.E.B. Stuart-Real Daughters  
(of the Confederacy) Award

**Sarah Swisher**

## CALENDAR OF EVENTS

<b>May 21</b>	First Summer Session classes begin
<b>June 28</b>	First Summer Session classes end
<b>July 2</b>	Second Summer Session classes begin
<b>Aug 9</b>	Second Summer Session classes end
<b>August 27</b>	Fall Semester classes begin
<b>Oct 12</b>	Fall Break
<b>Nov 17</b>	Thanksgiving Break begins
<b>Nov 25</b>	Thanksgiving Break ends
<b>Dec 12</b>	Fall Semester classes end
<b>Dec 21</b>	Fall Commencement Ceremonies



On Feb. 21, 2012, the APSC faculty celebrated the arrival of a visiting professor from Turkey, Mehmet Yardimci (center), and the Virginia Tech Scholar of the Week, Rami Dalloul, by meeting for chicken wings at Bull & Bones in Blacksburg. The night culminated with voting for the ugliest shirt, and the award went to Dave Gerrard. The runners-up were Rob Rhoads and Paul Siegel.



**Wei Zhang**, a Ph.D. student, is a 2012 recipient of the Sigma Xi Grant-in-Aid of Research Grant and JAR Poultry Research Travel Grant. Zhang earned her M.S. in animal genetics from the China Agricultural University in 2011. She is currently researching the molecular regulation of adipose tissue deposition and is advised by Elizabeth Gilbert.

The Poultry Club once again had an exciting year with the highlight being the trip to the International Poultry Exposition in Atlanta, Ga. The trip was educational and resulted in almost everyone who attended receiving job or internship offers. These members will be spending this summer in Illinois, Iowa, North Carolina, Maryland, and Virginia.



**Lindsay Sumners**, a Ph.D. student, is a 2012 recipient of the JAR Poultry Research Travel Grant. Sumners earned her M.S. in 2011 in poultry immunology from Virginia Tech, advised by Rami Dalloul. She is currently researching adipose tissue development and glucose metabolism in chickens divergently selected for high or low body weight and is advised by Elizabeth Gilbert.

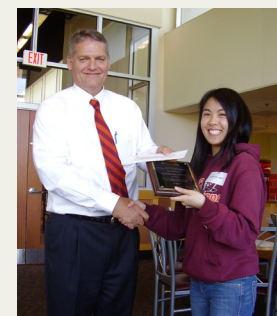
**“Wendy” Zhao** from Sichuan Agricultural University will be returning to China at the end of May. While here on sabbatical with Paul Siegel and Elizabeth Gilbert, Zhao completed two research projects that will be published in the next few months. We will miss her smiling face and pleasant personality.

**Paul Siegel** had a great time at the University of Alberta with Frank Robinson’s group, just prior to his leaving for a period in China in Beijing and Anhui provinces. The poultry industry is booming in China.

## Outstanding

### APSC Graduate Students

*The Outstanding M.S. Student Award, established to annually recognize the outstanding master’s student in the Department of Animal and Poultry Sciences, was awarded to Kimberly D. Fisher. Kim received her M.S. in animal and poultry sciences in Fall 2011. Kim is from Milton, W.Va. and earned her B.S. at Virginia Tech as well. Her thesis is titled, “Dietary manipulation causes childhood obesity-like characteristics in pigs.”*



*Samantha G. Won received the Outstanding Teaching Assistant Award. This award was established to recognize annually the outstanding*

*M.S. or Ph.D. student in the Department of Animal and Poultry Sciences who has excelled in teaching. Samantha began her master’s program in Fall 2010 after receiving her B.S. in animal and poultry sciences. Samantha is from Stafford, Va.*

*The annual E. T. Kornegay Outstanding Ph.D. Award was established to recognize the outstanding Ph.D. student in the Department of Animal and Poultry Sciences. This year’s recipient is Chasity M.*



*Cox, who is in the third year of her graduate program in poultry immunology. Chasity is a native of Fredericksburg, Va.*



*2012 Spring MARE Center students at the Sporthorse Handling Clinic at Hedgeland Equestrian Center on April 7, 2012.*

*From left: Eleanor Gould, Krissy Peacock, Kaitlyn Behr, Bob Orton, Quinnten Alston, Kaitlyn Peden, Jocelyn Cuthbert, Sarah Swisher.*

## MARE Center activities

On April 7, six students enrolled in the immersive equine science curriculum at the Virginia Tech Middleburg Agricultural Research and Extension (MARE) Center were invited to participate in the inaugural Sporthorse Handling Clinic at the Hedgeland Equestrian Center in Waterford, Va.

The event, sponsored by the Mid-Atlantic Hanoverian Breeders' Club, featured two of the most well-respected professionals in the country, top young horse specialist Bob Orton, and 2011 Top Handler at Dressage at Devon, Quinnten Alston. Blending concepts in horse behavior, anatomy, and biomechanics, the clinicians worked with teams of students to bring out the best in each horse's conformation and gait, and improve communication between horse and handler.

Representing Virginia Tech's internationally-recognized herd of sport-horses were the Elite Hanoverian mare Conteah (by Contucci), and the Dutch Warmblood mare Odet II (by Jorn), who has been shown by Virginia Tech students to numerous Championship titles over the years. The clinic also featured a number of lovely yearlings, two- and three-year olds owned by regional breeders, and an exceptionally informative seminar and demonstration on starting young horses under saddle.

The experience was a fantastic learning opportunity that allowed the MARE Center students to gain practical experience while networking with top trainers and breeders from the Mid-

Atlantic region. Eleanor Gould, an APSC senior from Baltimore, Md., said, "It was a great experience that taught us to think much more carefully about how we interact with our horses." These sentiments were echoed by APSC sophomore Kaitlyn Peden, who noted, "The clinic made me much more conscious of my body position and how it affects the horse, both in the stand-up for the judge as well as when showing the horse at the walk and trot. I also learned techniques to get horses to stay in their own space and out of mine." APSC senior Kaitlyn Behr, from Winchester, Va., remarked, "I was really able to see things from a different perspective. It was a great learning experience." Jocelyn Cuthbert, a senior in Equine Science at Colorado State University, commented on the connections between work on the ground and in the saddle. "It definitely connected the dots between riding and handling horses. It was a valuable hands-on learning experience," she said.

We are very grateful to the Mid-Atlantic Hanoverian Breeders' Club for hosting such an informative clinic and inviting our students to participate. Virginia Tech has been breeding high quality sporthorse for nearly two decades, providing unique national and international experiences for students interested in careers in the equine industry, veterinary medicine or equine science fields. For more information on our programs, please visit [www.equine.vt.edu](http://www.equine.vt.edu).

### Equine science students gather for 2<sup>nd</sup> annual Undergraduate Research Symposium

There were no April Fools at the second Undergraduate Equine Science Research Symposium, hosted at Penn State University on March 30 and April 1, 2012. The first event, organized by Rebecca Splan, Ph.D. (VT) and Burt Staniar, Ph.D. (PSU), was hosted at the MARE Center in 2011. This year, Virginia Tech and Pennsylvania State University were joined by students and faculty from The Ohio State University and Cornell University.

The event drew nearly 50 students and faculty from four universities. Participants discussed a variety of research topics, and undergraduate students presented results from research efforts ranging from changes in hind gut microbial activity in horses on fresh or preserved forages to metabolic responses of obese and normal-weight mares to acute exercise. Posters were also displayed, allowing students to mingle and discuss the research in a more casual setting.

Faculty and students from Penn State led tours of their facilities before breaking the attendees into groups for a variety of hands-on experiences. These sessions included such activities as conducting fecal egg count tests, measuring growth and development in young horses, and tracking the effects of exercise via the use of on-board heart rate monitors.

The keynote speaker was Dr. Sue McDonnell, a specialist in equine behavior at the University of Pennsylvania's Veterinary School. Other invited speakers included Brian Egan, who presented the history and development of the PSU quarter horse program; Holly Corcoran who discussed the importance of research to the sport of endurance riding; and Suzanne Meyers, Ph.D., who explained the mission and philosophy of Next Level Horsemanship.

Staniar and Splan considered the event a huge success and look forward to collaborating with more universities next year to continue fostering scientific discovery and sharing among undergraduate students in equine science.



## APSC well-represented in 2011-2012 Senior Pratt Research Program

Written by C. M. Wood

**The John Lee Pratt Animal Nutrition Senior Research Scholarship Program was developed to encourage undergraduate research in animal nutrition.** A number of scholarships are awarded annually to rising seniors to aid in conducting senior research projects under the guidance of faculty advisors. A research proposal and letter of application from the student and his or her faculty advisor are required. The successful applicants are awarded a \$3,000 scholarship, divided equally between fall and spring semester. At the end of the spring semester, students present their research results at a symposium. This year, eight of the 10 scholarship recipients were animal and poultry sciences majors or double majors. The students, their research topics, and their faculty mentors included:

<b>Rachel K. Grant</b>	“Food Intake and Epigenetic Changes in Chickens”	Mike Denbow
<b>Katherine D. Knight</b>	“The Effect of <i>In Ovo</i> Feeding on Peptide Transporter Expression”	Eric Wong
<b>Virginia Lyman</b>	“In-Vitro Effects of Leptin on Mammary Cell Function and Protein Synthesis”	Mark Hanigan
<b>Melodie Messer</b>	“Role of AMPK in Food Intake Regulation in Chickens”	Mike Denbow
<b>Karen M. Park</b>	“Effects of Staggered Iron Supplementation on the Growth and Well-Being of Swine from Birth to Market”	Cindy Wood
<b>Miranda M. Ritzi</b>	“Evaluation of Performance and Immune-related Gene Expression in Broiler Chicks upon <i>In Ovo</i> Probiotic Supplementation”	Rami Dalloul
<b>Lauryn M. Singer</b>	“The Effect of Individual Amino Acids on the Protein Synthesis of Mammary Tissue”	Mark Hanigan
<b>Laura Thomas</b>	“Herbage Quality, Biomass, and Animal Performance of Cattle Grazing Teff”	Ozzie Abaye

## Virginia Tech students travel to Germany to experience international horse industry

In June, 2012, MARE Center faculty will lead 15 undergraduate students on a two-week tour of the German sporthorse industry. The study abroad course, now in its third year, offers students an unprecedented opportunity to experience the horse industry on a global scale, network with the world’s best owners, breeders and trainers, and enhance their personal and professional growth in one of the world’s most successful countries in equestrian sport.

The trip is facilitated through Virginia Tech’s long-lasting partnership with the International Sporthorse Registry and Oldenburg Registry of North America. The registry’s breeding director, Dr. Christian Schacht, plays a key role in ensuring that Virginia Tech students get a ‘backstage pass’ to the finest horses, stud farms and equestrian events Germany has to offer.

Prior to the trip, students will engage in learning modules designed to increase their knowledge of German history, sport-horse breeding, and the horse in Europe.

While on the tour, students will visit many of the top stallion stations and breeding farms and discuss topics of marketing, sales, breeding, and training with prominent members of Germany’s horse industry. They will also attend high-level equestrian events and interact with show and registry officials to learn the ins and outs of event management and industry structure. Students will receive theoretical and practical instruction in riding and training at the Mecklenburg State Stud in Redefin, and become certified in the Germany riding system.

“This course is truly a transformational experience for our students,” says Rebecca Splan, associate professor of



*During the 2010 summer equine science study abroad tour, Enno Hempel, head of marketing and public relations for the Hanoverian Verband, shows students the Wall of Fame at Celle, Germany, and explains how the Hanoverian has come to dominate the German sporthorse industry and international sporthorse breeding.*

animal and poultry sciences, and creator of the course. “The knowledge, skills and networking they gain from it will have a lasting impact on their personal and professional lives. We are delighted to be able to offer them this opportunity.”

# Equestrian Club has a busy spring semester

Written by Marion Carroll

**The Virginia Tech Equestrian Club finished out the academic year with another fun, busy spring semester.**

The club hosted back-to-back horse shows over a weekend in early February with an IHSA hunter show and IHSA Regionals. Nine riders from our hunter team qualified to ride in the post-season regional competition: Jennifer Osterman qualified for Open Fences and Open Flat; Anna Norwood for Intermediate Fences; Megan Kunsman for Intermediate Flat; Jessica Ropelewski for Novice Fences; and Rachel Calvert for Novice Flat. Maria Rittenhouse, Marion Carroll, and Lauren O'Neil qualified for Advanced Walk/Trot/Canter, and Sandra Chrostowski qualified for Walk/Trot. Lauren O'Neil also received the most improved rider award for our region.

From regionals, five riders placed first or second, qualifying them for the Zones competition hosted by Virginia Intermont College. Jennifer Osterman was champion of Open Fences, Anna Norwood was reserve champion of Intermediate Fences, Jessica Ropelewski was champion of Novice Fences, Lauren O'Neil was champion of Advanced Walk/Trot/Canter, and Sandra Chrostowski was champion of Walk/Trot.

From Zones, Anna Norwood of Intermediate Fences, Jessica Ropelewski of Novice Fences, and Lauren O'Neil of Advanced Walk/Trot/Canter were champion or reserve champions of their respective divisions, moving them on to participate in the national competition.



*Members of the Hunter Team at Nationals on Virginia Tech Horses.*



*Cassella Slater and Nimue at the Memorial Show.*



*Rachel Calvert and Daily at the Memorial Show.*

This year's national competition was held in Raleigh, N.C., from April 30 to May 5. Norwood, Rapelewski, and O'Neil competed and represented Virginia Tech on May 3. Virginia Tech also took Taz, Paloma, Sage and Ferragamo, four of our equitation horses, to Raleigh as well to provide for the National Competition.

Our IDA dressage team also had a successful season with senior Cody Armstrong qualifying for nationals at first level. Armstrong finished her season by placing ninth in the national competition. Danielle Dombrowe of the dressage team was also named the most improved rider for Region H.

Our IHSA western team also had a great season, with two riders qualifying for the post-season regional competition: Aubrey Lowrey qualified in the Intermediate Horsemanship division, and Maggie Gregg qualified in Open Horsemanship and Reining.

**Congratulations to all our riders and teams on successful seasons!**

The Equestrian Club also hosted our annual Emily Jane Hilscher Memorial Horse Show in honor of Emily Jane Hilscher, who was one of the victims of April 16, 2007. Every year, all proceeds from the horse show go to the Emily Jane Hilscher Memorial Fund. This fund finances a scholarship awarded to animal and poultry sciences majors at Virginia Tech.

This horse show is the Equestrian Club's way of celebrating the life of this wonderful woman. The show is always open to anyone who wants to participate, Virginia Tech student or not, and this year the show had grown from last year. We hope it will continue to grow and be successful in the coming years.

The Virginia Tech Equestrian Club had an enjoyable and successful spring semester, and we are looking forward to a bright future in the fall!

## Graduate students graduating

Student	Degree date	Major professor	Thesis/dissertation title
Brad Reinholt	M.S. Jan. 2012	Honglin Jiang	Inactivation of Stac3 causes perinatal death and skeletal muscle defects in mice
Jacob Gleason	M.S. Jan. 2012	Mark McCann	Factors affecting sale price of Angus, Simmental, and Sim-Angus bulls in Virginia BCIA Test Stations
Michael Ashby	M.S. Jan. 2012	Jeffrey Escobar	Growth, carcass, and financial implications of feeding a wheat-distillers dried grains with solubles based diet to finishing swine
Carin Miller	Ph.D. Jan. 2012	Dave Gerrard	Regulatory balance between peptide transporter, PepT1, and amino acid transporter gene expression in the enterocyte
Greg van Eyk	M.S. Apr. 012	Jeffrey Escobar	Dietary fat and sugar induce obesity and impair glucose tolerance in prepubertal pigs
Hanbae Lee	Ph.D. Apr. 2012	Jeffrey Escobar	Impact of exogenous factors on amino acid digestibility in non-ruminants

## Youth Cattle Working Contest teaches youth beef quality assurance and safe cattle handling

The State Youth Cattle Working Contest took place on April 21, 2012 at the Rockingham County Fairgrounds in Harrisonburg, Va. To qualify for the state contest, teams must have placed in the top two at their respective regional contest. Winning the event involves several skills, one of which is teamwork — each team consists of three members who must work in unison to process three head of cattle. Each team is evaluated on completion of a cattle-processing map, safety of cattle handling, and proper implant, vaccination, de-wormer and tagging technique. All teams are timed and given points for each of the respective skills they must demonstrate.

Twelve teams competed at the Southwest Virginia Agricultural Research and Extension Center in Abingdon, Va., and the top qualifying teams were from Grayson County 4-H/FFA and Abingdon FFA. At Steele's Tavern, 16 teams competed and the top teams that qualified for state were Riverheads

FFA Team A and Rockingham 4-H Team B. At the New River Valley Regional contest, held at Larry Keith's Farm, 26 teams competed, and Carroll County 4-H, Carroll County FFA and two teams from Grayson County 4-H/FFA qualified for the state contest. The last regional contest was held at the Tucker Farm in Madison, where 15 teams competed; Orange County 4-H Team A and Orange County 4-H Team B qualified for state.

From these qualifying teams that competed in the state contest at the Virginia Beef Expo in Harrisonburg, the top three team winners were: first place, Orange County 4-H Team A coached by Steve Hopkins with team members Garret Chambers, John Michael Knight, and Elizabeth Nixon; second place, Grayson County 4-H/FFA coached by Mark Osborne and Jimmy Osborne with team members Allen Osborne, Mitchell Hash, and Hannah Eller; third place, Rockingham 4-H Team B Team coached by John Welsh with team members Caroline Warns, Zach Seekford, and

Ashley Craun. Congratulations to all of the teams that competed!

We would like to thank our 2012 State Cattle Working Contest Sponsors for their support that helped to make this program a success: Virginia Beef Industry Council; Central Virginia Cattlemen Association; Novartis Animal Health Inc. – Irene Brown; Merial; Pfizer Animal Health; Bayer Animal Health; Intervet Inc.; Boehringer-Ingelheim Animal Health; Tucker Livestock; Farmers Livestock Exchange; Winchester; and Priefert Chute Systems for providing facilities for the state contest.

Lastly, a special thanks goes to Wayne Shifflett Livestock for providing the livestock for the state contest as well as the Virginia Beef Expo. For more information about the Youth Cattle Working Contest please contact Dee Whittier, Virginia Cooperative Extension veterinarian, or Paige Pratt, youth livestock specialist in the Department of Animal and Poultry Sciences.

## Virginia Tech Horse Judging Team activities

For the 2012 Spring Horse Judging Team, their quest for success was a star-studded experience. The team of seven molded together and survived their first taste of competitive jitters at the Block and Bridle contest. With the two spring contests nine days apart, the rest of the spring seemed a whirlwind of activity.

On the way to the Middle Tennessee State University spring contest, the team was moved to see the Hughes family farm rebuilt after the total destruction and sorrow witnessed after the tornado last spring. Kyle Hughes shared many quality horses, as did Butch and Terry Butcher in Knoxville and Bobby Richards in Franklin, Tenn., on the trip to the Middle Tennessee State Contest. The Hokies finished behind the ever-strong Black Hawk

Team from Illinois.

Just four days after the Tennessee trip, the team flew to Texas. The team enjoyed four days of farm visits with many historical, human and horse, industry icons. A Virginia native, Will Kneubenshoe hosted the Hokies on their first stop to study quality western riding and trail horses. Other stops with Josh Larman halter horses, Thoroughbreds at the famous Valor Farm and meeting Ted Turner in his last days on the Terry Bradshaw ranch with several world champion halter horses made for quite a first day! Special highlights, were a judging clinic hosted by the \$3 million rider and Olympic champion, Tim McQuay, and meeting Gunner, a million dollar reining horse sire. Seeing Blazing Hot, a world class sire of performance horses at the Schroeder Ranch, after judging six classes on the ranch, was a treat as well. The final "reward" was attending the Ft. Worth Super Stakes Cutting event and talking with Austin Shepard of Alabama, a talented

trainer.

The 2012 contest went smoothly, and the Hokies finished seventh in the contest overall with 25 teams participating. We are proud of Sami Rowe, for her third place award in performance judging, and several other members who were just outside the top ten in various other categories. Maureen Howren, the high scoring Hokie in Texas, placing fourteenth overall, said, "You can't learn much better than from immersing yourself in the horse industry, especially by traveling to see quality places and talented people like we did. The hard work and challenge of learning more about judging and the industry only made the experience more rewarding when it was over."

Graduating senior Amanda Bradbery said, "It was a great experience to be able to compete with two teams for two years. I learned a lot from both groups through our travels and contests. Being the chair of the 2012 Block and Bridle contest showed me the other side of judging, giving me a greater appreciation for the people working behind-the-scenes. Being a member of the Virginia Tech Horse Judging Team was one of the best experiences in my four years."

The team was coached by Julia McCann, but a great deal of assistance from 2011 team members Ali Chisholm and Courtney Walski was important to the team's success. Once a team member, the importance of giving back to help others grow towards the rewards of being a member of a competitive horse judging team is priority. Several of the members are currently working with 4-H and FFA groups to earn that winning feeling of just getting through those reasons! Go Hokies!



*Spring Horse Judging Team at the American Paint Horse Association headquarters, Ft. Worth, Tex.*

*From left: Sami Rowe of Youngsville, N.C.; Grace DeFelippis of Chesterfield, N.J.; Kelsey Lamb of Mullica Hill, N.J.; Maureen Howren of Glen Allen, Va.; Amanda Bradberry of Chester, Va.; Erica Jacquay of Oakton, Va. and Brittany Neal of Chesterfield, Va.*

# More than 300 youth exhibit at Junior Beef Round-Up

The Junior Beef Round-Up at the Virginia Beef Expo provided a learning and growing environment for the 240 cattle and 305 exhibitors as well as the many Virginia Tech students helping with the event. With the support of the Department of Animal and Poultry Sciences, many community businesses, and Block and Bridle members, the event began with showmanship followed by the steer and heifer show. Youth of all ages and from numerous breed organizations came together for a good time and some friendly competition at the Rockingham County Fairgrounds.

Each day, cattle were cleaned and fussed over while kids donned their button down shirts, boots, jeans, and belt buckles. The youth showmanship was a true testament of the time and care that goes into the youths' animals as well as the improvement of their own skills. The kids are judged in the contest on how well they present and show their animal and the animal's attributes to the judge.

Early the next morning, Block and Bridle members arrived to help serve as announcers and ring stewards and to line up cattle for the next class. The youth prepared themselves and their cattle for the commercial heifer and steer shows. The focus was placed on the animals' best attributes hoping to catch the judge's attention. For many

of the kids, the feed and breeding selection paid off. They helped to promote an industry they love by selecting or breeding an animal that would meet the recommendations and requirements for a top quality show and carcass animal.

The youth fed, worked with, and cared for their animals to demonstrate how hard work paid off. This year was no exception as the exhibitors provided a top quality, competitive show. For more information on youth livestock events in Virginia please contact Paige Pratt, youth livestock Extension specialist for the Department of Animal and Poultry Sciences.



4-H and FFA youth identify equipment that is commonly used in the livestock industry. This is one part of the stockmen's contest that was created by a Virginia Tech APSC student.

Virginia Tech Block and Bridle students helped grade cards at the stockmen's contest.



Grayson County Youth Cattle Working Team implants and vaccinates a steer at the Youth Cattle Working Contest State Championships held in conjunction with the Junior Beef Round-up.



Youth competing in senior showmanship at the Junior Beef Round-up.

2012 Champion Youth Cattle Working Team - Orange County 4-H coached by Steve Hopkins, Orange County Extension Agent.



## Update Your Information

We are interested in knowing what you are doing! Please help us keep our mailing list current by completing and returning this form to the Department of Animal and Poultry Sciences, Virginia Tech (0306), Blacksburg, VA 24061 or email vtapsc@vt.edu with the following information.

Name: \_\_\_\_\_ Year and Degree: \_\_\_\_\_

Home Address: \_\_\_\_\_

Employer: \_\_\_\_\_

Current Position: \_\_\_\_\_

Work Address: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

News about Yourself: \_\_\_\_\_

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Would you like to be contacted concerning support of one of our scholarship programs or extra-curricular group activities?

Yes

No

## APSC Contact Information

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Teresa McDonald ..... 231-3555

#### Poultry Club

Audrey McElroy ..... 231-8750

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Sheep Center ..... 231-6988

Smithfield Horse Unit ..... 231-4366

Swine Center ..... 231-6250

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Campbell Arena ..... 231-3555

Judging Pavillion ..... 231-9150

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The Department of Animal and Poultry Sciences newsletter is published by the Department of Animal and Poultry Sciences, 3460 Litton Reaves Hall (0306) Virginia Tech, Blacksburg, VA 24061

Please contact (540) 231-6311 or vtapsc@vt.edu with questions, comments, or requests for information.